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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of

:

Mutsuhito KAINE et al.

Attn: BOX PCT

Serial No. NEW

Docket No. 2001-0988A

Filed July 16, 2001

MAGNETIC RECORDING APPARATUS [Corresponding to PCT/JP01/01616

Filed March 2, 2001]

## PRELIMINARY AMENDMENT

Assistant Commissioner for Patents, Washington, DC 20231

Sir:

Prior to examination of the above-referenced U.S. patent application please amend the application as follows:

## IN THE SPECIFICATION

Please amend the specification as follows:

Please replace the paragraph beginning at page 7, line 3, to page 8, line 3, with the following rewritten paragraph:

In formulas (1)-(3), A1-A3 are amplitudes, and B1-B3 are DC components. Here, a ratio of the amplitude to the DC component in each of v5'-v7', that is, A1/B1 (or A2/B2, A3/B3) is referred to as a modulation factor MOD. As shown in figure 6, the I-V converting units 353 and 354 are connected to a differential arithmetic unit 374 through variable gain amplifying units 476, 477 and envelope curve detecting units 356, 357, respectively. Thereby, the voltage signals v5 and v6 outputted from the I-V converting units 353 and 354 are adjusted in the variable gain amplifying units 476 and 477 such that the maximum amplitudes (A1+B1 shown in figure 7) of the periodic signals become equal to each other, and then detected as displacement signals v5' and